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THE PLANT DISEASE REPORTER

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THE PLANT DISEASE SURVEY

OFFICE OF MYCOLOGY AND DISEASE SURVEY

Vol. XIII October 15, 1929 Number 11

OFFICE NOTES

ANNUAL CEREAL DISEASE REPORT

A memorandum was sent to chief collaborators on September 25 requesting the annual report on cereal diseases. The report is to be prepared as usual on 4 x 6 forms with maps on the reverse, but a special appeal is made for an increase in the amount of information over other years. The form is small and not large enough to contain all the data that are needed for each disease. Collaborators are therefore urged to extend their remarks onto other cards and to furnish copies of special summaries, reports, counts of disease infections in experimental plots, bulletins, etc.

In the preparation of this report the readers of this Reporter, pathologists in general, and collaborators in particular, are asked to lend a hand by furnishing the chief collaborators of their states with as much information as they can, and by assisting in any other possible ways. The Survey project is a cooperative one for the collecting of information which will be of use to pathologists and through them to those who are facing the losses from plant diseases. The success of the project therefore is measured by the degree of cooperation rendered by those on whom we must depend for the data.

The following is a list of the collaborators from whom the cereal disease report was requested and with whom you are requested to cooperate. The report is due in Washington, November 15.

Arizona	R. B. Streets	Univ. of Ariz., Tucson
Arkansas	V. H. Young	Agr. Exp. Sta., Fayetteville
California	W. W. Mackie	Univ. of Calif., Berkeley
Colorado	E. C. LeClerg	Agr. Coll., Fort Collins
Connecticut	G. P. Clinton	Agr. Exp. Sta., New Haven
Delaware	J. F. Adams	Agr. Exp. Sta., Newark
Florida	G. F. Weber	Agr. Exp. Sta., Gainesville
Georgia	O. C. Boyd	P.O. Box 193, Albany

Idaho	C. W. Hungerford	Agr. Exp. Sta., Moscow
Illinois	L. R. Tehon	Univ. of Illinois, Urbana
Indiana	M. W. Gardner	Agr. Exp. Sta., Lafayette
Iowa	R. H. Porter	Iowa State College, Ames
Kansas	C. O. Johnston	Agr. Exp. Sta., Manhattan
Kentucky	W. D. Valleau	Univ. of Ky., Lexington
Louisiana	C. W. Edgerton	Agr. Exp. Sta., Baton Rouge
Maine	Donald Folsom	Agr. Exp. Sta., Orono
Maryland	R. A. Jehle	Md. Agr. Coll., College Park
Massachusetts	W. H. Davis	Mass. Agr. Coll., Amherst
Michigan	Ray Nelson	Mich. Agr. Coll., E. Lansing
Minnesota	E. C. Stakman	Univ. of Minn., St. Paul
Mississippi	L. E. Miles	Agr. Exp. Sta., A. & M. College
Missouri	I. T. Scott	Agr. Exp. Sta., Columbia
Montana	P. A. Young	Agr. Exp. Sta., Bozeman
Nebraska	G. L. Peltier	Coll. of Agr., Lincoln
Nevada	P. A. Lehenbaur	Agr. Exp. Sta., Reno
New Hampshire	O. R. Butler	Agr. Exp. Sta., Durham
New Jersey	W. H. Martin	Agr. Exp. Sta., New Brunswick
New Mexico	R. F. Crawford	Agr. Coll., State College
New York	Charles Chupp	Cornell Univ., Ithaca
North Carolina	G. W. Pant	Agr. Exp. Sta., Raleigh
North Dakota	W. E. Brentzel	Agr. Exp. Sta., Fargo
Ohio	H. C. Young	Agr. Exp. Sta., Wooster
Oklahoma	F. M. Rolfs	Agr. Exp. Sta., Stillwater
Oregon	H. P. Barss	Agr. Exp. Sta., Corvallis
Pennsylvania	R. S. Kirby	Pa. State Coll., State College
Rhode Island	H. W. Browning	R. I. State Coll., Kingston
South Carolina	G. M. Armstrong	Agr. Exp. Sta., Clemson College
South Dakota	E. A. Walker	Agr. Exp. Sta., Brookings
Tennessee	C. D. Sherbakoff	Agr. Exp. Sta., Knoxville
Texas	J. J. Taubenhaus	Agr. Exp. Sta., College Station
Utah	B. L. Richards	Utah Agr. Coll., Logan
Vermont	B. F. Lutman	Agr. Exp. Sta., Burlington
Virginia	S. A. Wingard	Agr. Exp. Sta., Blacksburg
Washington	F. D. Heald	Agr. Exp. Sta., Pullman
West Virginia	E. C. Sherwood	Agr. Exp. Sta., Morgantown
Wisconsin	R. E. Vaughan	Agr. Exp. Sta., Madison

VEGETABLE DISEASES

TOMATO DIE-BACK OR TIP BLIGHT FOUND IN INLAND AREAS OF CALIFORNIA

By

F. S. Beecher and Michael Shapovalov

In the last few years a disease known in California as die-back or tip blight of tomatoes has been so severe nearly every season in certain coastal sections as to result in practically an abandonment of tomato growing in these regions. This trouble appears to be somewhat like "streak" or "stripe" of tomatoes as described in the East and in England, and in some respects also closely resembles the Australian "spotted wilt", although the fruit seldom shows lesions of any kind.

Usually only a few sporadic cases have been found in the warmer and drier inland areas, so it was something of a surprise in June, 1929, to find the disease in commercial tomato fields in the vicinity of Merced, in the interior of the state. Two plantings showed up to 45 and 50 per cent of the plants moderately infected, with most fields showing an average of about 10 per cent. The trouble evidently was checked by June 20, and changed weather conditions were thought to be a factor. The growers stated that the disease has appeared there occasionally but does not seem to give them much concern.

In early August heavily infected plantings of tomatoes were also found inland near Riverside where only a few cases are found as a rule. These plants were interset among lemon trees and showed from 4 to nearly 50 per cent of infection, the greater amount appearing to be associated with the wetter portions of the fields. Other fields in the vicinity planted in the usual manner showed no infection. (Sept. 26)

YELLOWS

Donald Folsom, collaborator in Maine, has reported the following under date of October 8.

Celery

Apparently the same disease as that described by Severin (Hilgardia 3 (18), was seen this summer in southwestern Maine on our experimental farm, where in systematic sweepings, the vector Cicadula sexnotata was caught, for the first time in the three years in which the work has been carried on.

Carrot

Apparently the same disease as that described by Whetzel in the Plant Disease Reporter for September 1, 1929, was seen this summer in Orono, and in southwestern Maine on our experimental farm.

Fall dandelion (Leontodon autumnalis L.)

More conspicuous than it has been for some time in Orono.

Lettuce

The appearance of this disease in southwestern Maine for the first time in three years coincided with the first collections made of the vector Cicadula sexnotata during the last three years.

COTTON DISEASES IN FLORIDA

M. N. Walker has sent in the following report (October 3) on cotton diseases observed in the vicinity of Gainesville.

Cercospora spot (C. gossypina)

Extremely abundant late in the season, and where it was followed by Alternaria considerable defoliation resulted.

Alternaria spot (Alternaria sp.)

Seemed to be especially prevalent following Cercospora leaf spot but defoliation was localized and so late as to cause little injury.

Anthracnose (Colletotrichum gossypii)

A mere trace appeared in the fields around Gainesville.

Areolate mildew (Septocylindrium areola)

Present to a small extent late in the season.

Bacterial blight (B. malvacearum)

Abundant throughout the season around Gainesville, but of little importance. except in its capacity of opening the way for Diplodia which was very prevalent.

Diplodia boll rot (D. gossypina)

This disease was again the most serious boll rot observed in the fields around Gainesville where 10 to 20 per cent of the bolls were affected. Bacterial blight probably accounted for most of the initial infections.

Wilt (Fusarium vasinfectum)

Around Gainesville the disease was observed killing 75 per cent of plantings of the variety Trice, but of little importance in other varieties.

LATE BLIGHT OF TOMATO

During the past three years a high percentage of California tomatoes shipped during September, October, and November has been lost on account of decay caused by Phytophthora infestans. Conditions in the regions where a

great part of this fall crop is grown are favorable for blight development, that is, much foggy weather with temperature ranges between 50° and 75° F.

G. B. Ramsey, writing in the U. S. Bureau of Agricultural Economics, Fruit and Vegetable Division Letter 10 (38), Sept. 27, presents the following conclusions regarding symptoms and method of handling fruit exposed to infection.

"Field and packing-house observations and experiments, together with experimental test shipments made by the writer during 1928, appear to justify the following conclusions. It should be kept in mind, however, that further work to be conducted this fall may show that some of these statements need modification:

"1. Late blight is a field disease of tomatoes, which is evident on the vines immediately before and during the time decay shows on the fruit.

"2. Tomatoes harvested from plants showing an appreciable amount of blight are certain to show some decay.

"3. Fruit harvested from badly blighted vines should be held for at least four days and then be carefully sorted before packing for shipment. This procedure will greatly reduce the danger from loss during transit, but will not entirely eliminate it.

"4. Infection of the fruit takes place at the stem scar in practically all instances, but may also take place through a wound in any part of the tomato.

"5. After the fungus gets into the stem scar, it usually takes from three to five days for the decay to become visible.

"6. The first evidence of decay is a small light-brown watersoaked blotch at the edge of the stem scar. Pressure applied by moving the thumb over this blotch toward the stem causes drops of water to come out at the edge of the scar.

"7. Tomatoes showing no evidence of decay may develop spots varying in size from 1/2 inch to 1 1/2 inches in diameter during six days' transit.

"8. Spots present on the fruit at shipping time increase from 1 to 1 1/2 inches in diameter during six days' transit.

"9. Spread of the disease from decaying fruit to healthy fruit during transit is rare.

"10. Experiments on washing tomatoes in sterilizing solutions show that the amount of decay may be reduced 50 per cent or more, but it is not felt that this method should be recommended at this time."

(G. B. Ramsey, Sept. 16)

POTATO AND CABBAGE DISEASES IN MASSACHUSETTS

W. H. Davis has sent in the following report (October 8).

POTATO

Rhizoctonia solani: Practically all the potatoes I have observed have plenty of sclerotia.

Scab (Actinomyces scabies): Not prevalent. Located in but one plat. Least I have seen in 5 years' survey in Massachusetts.

Late blight (Phytophthora infestans): Very scarce. Have tried to locate rot in tubers but without success. Located conidia on leaves from a plat on the river bottom lands in September. Did not seem to be exceedingly injurious. Dry weather seemed to be of more account.

Drought: I have conversed with several growers and observed plats in several counties and most agree "potatoes are half a crop on account of the dry weather."

CABBAGE

Phoma lingam: Located in a field for the first time in 1929 on October 1. Not injurious to any extent. On cut cabbage stumps and a few leaves. Cabbage observed are especially healthy this fall.

Sclerotinia libertiana: Cannot locate a specimen. In previous years and especially 1926-1927 was very injurious.

Club root (Plasmodiophora brassicae): Present but not so prevalent as previous years.

Alternaria brassicae; Prevalent but not injurious to any noticeable extent.

RUST ON SWISS CHARD

A specimen of Uromyces betae on Swiss chard collected September 25 has been received from H. P. Barss of Oregon. This is the second report and specimen to be received from that state.